

**PRELIMINARY DRAFT - February 24, 1997**

**CALIFORNIA AIR RESOURCES BOARD**

**1994/1995 MID-TERM MEASURES SURVEY COVERAGE ADJUSTMENTS**

Introduction

In order to adjust the Volatile Organic Compound (VOC) emissions from the Mid-term Measures survey to reflect complete market coverage, an estimate of the survey coverage was developed using the Air Resources Board's (ARB) 1990 and 1991 consumer products surveys, the United States Environmental Protection Agency's (U.S. EPA) 1990 consumer products survey and the shelf surveys we performed during the summer of 1995.

Methodology

The survey market coverage estimate was developed by comparing lists of responding companies in each product category between the various surveys. First, the U.S. EPA 1990 survey respondents were compared to Mid-term Measures survey respondents. All products from companies that responded to the U.S. EPA 1990 survey but not the Mid-term Measures survey were marked as "Missing Products". Next, the ARB 1990 and 1991 survey respondents were compared with both the Mid-term Measures respondents and the U.S. EPA respondents in the "Missing Products" file. All products from companies that responded to the ARB 1990 and 1991 surveys but not the U.S. EPA or Mid-term Measures surveys were included as "Missing Products".

Adjustments

The "Missing Products" for each category were then checked for applicability. In product categories where there is industrial or agricultural use, large product sizes were removed from the list. All products which came in container sizes greater than five gallons were deleted. For products which were designated as being for household, commercial and industrial usage, factors were assigned based upon the range of reported product sizes. For example, a product which claimed to be for household and commercial use, sold in sizes ranging from 16 ounces to 5 gallons, might be assigned a factor of 0.3, meaning 30 percent of the product VOC content would be included in our inventory.

Products which were miscategorized were also removed from the list. Miscategorizations were determined based upon the product name.

The U.S. EPA survey had broad categories for lubricants, herbicides and automotive rubbing compounds and polishes, whereas the Mid-term Measures survey split these categories into subcategories. Therefore, adjustments to market coverage for these categories were made by recombining the ARB categories to make them consistent with the U.S. EPA categories. The ARB combined categories were then compared to the U.S. EPA categories, and "Missing

Products" were marked. From this comparison, a percentage increase in emissions was determined for the ARB combined categories, and this percentage was then applied to the subcategories.

### Justification

Inclusion of products from the U.S. EPA 1990 and the ARB 1990 and 1991 surveys could overestimate emissions by counting emissions from products which are either no longer manufactured or were never sold in California. However, in processing the "Missing Products" files, we found many popular brands and products which are currently sold in California and were also sold during the time frame of the survey. Additionally, our shelf surveys show a large number of products which did not appear in any of the surveys. It is expected that the estimated increase in emissions from products not sold in California or no longer manufactured would be offset by emissions from products which were not reported in any of the surveys.

During the compilation of the "Missing Products" files, it was assumed that if a company responded to both surveys, then all relevant products for that particular category were reported. This assumption is conservative. One of the problems we encountered during the Mid-term Measures survey was confusion by companies as to whether a particular product was "institutional" versus "industrial". It appears that some companies did not report institutional products because they believed they were for "industrial" use only.

### Summary

In summary, the emissions from the 21 categories under consideration for the Mid-term Measures is now estimated to be 31 tons per day, which approximates our previous estimates for these categories. Due to underreporting, the Mid-term Measures survey predicts 18.4 tons per day from these categories. This yields an average market coverage of approximately 60 percent, although this varies by category.

Some categories had market coverage of only 20 to 30 percent. The reasons for this include:

- \* Few respondents among the retail store chains (supermarkets, drugstores, auto parts stores, etc.);
- \* Large companies that have not responded or are in the process of responding; and
- \* Misunderstanding of what products are "institutional" versus "industrial".

We are still receiving surveys and compiling sales and formulation data between private label marketers and manufacturers, as well as sending out surveys to companies. As more responding companies are added to our survey database, these respondents will be deleted from the "Missing Products" files to avoid double counting of emissions.